

# Lessons in Learning

With Gordon Eldridge

## Writing to Learn: How to Maximize the Effectiveness of Learning Journals

We often assume that writing almost automatically fosters learning. Yet research suggests that this may only be true if the structure of the writing task explicitly supports the use of specific cognitive and metacognitive strategies. Learning journals are specifically intended to foster the use of these kinds of strategies, and a number of studies have indeed demonstrated learning gains for students involved in writing learning journals.

Some of these studies have also shown that learning journals can produce better results than having students engage in other types of writing, such as writing summaries (Cantrell, Fusaro, & Dogherty, 2000). But what is it about learning journals that can make them a superior form of 'writing to learn'? Just how should a learning journal be structured to best support learning? And what kind of support do we need to provide to ensure students

get maximum benefit from writing them?

Learning journals can help develop strategies that lead to self-regulated learning. In order to achieve this, Hübner, Nückles, and Renkl (2010) suggest that they should include prompts which foster the use and development of three kinds of strategies: organizational strategies, elaboration strategies and metacognitive strategies.

Organizational strategies help build the relationships between ideas within the material to be learned, and include such things as extracting the main points and structuring or organizing the material logically. Elaboration strategies help build the connections between the ideas in the material to be learned and the learner's prior knowledge and understanding, and include such things as generating examples and using analogies and metaphors. Metacognitive strategies help the

learner monitor their on-going learning, so they can identify misconceptions and guard against incomplete or superficial understanding.

What does this look like in a learning journal format? Hübner, Nückles, and Renkl used the following prompts to structure the learning journals in a study with 70 German secondary school students:

- *Cognitive Prompts*

Organization: "How can I best organize the structure of the learning content?"

Elaboration: "Which examples can I think of that illustrate, confirm or conflict with the learning content?"

- *Metacognitive Prompts*

Monitoring: "Which main points have I understood well? Which main points haven't I understood yet?"

Planning Remedial Strategies: "What possibilities do I have to overcome my comprehension problems? Which passage of the video should

I try to recapitulate in my mind's eye?"

The study involved students listening to video-taped lectures and then writing learning journals. The researchers were mostly interested in the kinds of support they could give students to help them make use of the strategies embedded in the prompts listed above. They tested four different conditions: (1) no support beyond the prompts, (2) provision of an exemplar of a well-written learning journal using the prompts, (3) provision of explicit teaching as to why the strategies embedded in the prompts support learning and (4) provision of both an exemplar and explicit instruction in the rationale behind the prompts.

Participants were given two sets of video-taped lectures seven days apart, but the supports were only provided in the initial session. The second session was included to investigate how well the effects of the



Gordon Eldridge is currently Curriculum Director at the International School of Brussels, Belgium.

supports would transfer beyond the context in which they were originally encountered. The researchers assessed both (a.) the extent to which the participants had effectively used the prompts in writing their learning journals and (b.) the learning outcomes of participants in each of the four conditions.

So what were the results of the study?

... continued on p. 33

## Do Closed-Search WebQuests Help or Hinder Student Learning?

As we all know, the internet can be both a boon and a curse in the classroom. It brings a wealth of information to students' fingertips, but can also overload them with information which is often either not particularly relevant to the task they are performing, or ill-suited to the reading levels of younger children.

One way to reduce both of these difficulties is to provide students with a limited number of pre-selected sites from which to glean useful information for projects they are involved in. But is this really helpful, or does it merely place limitations on students?

A group of researchers in the Netherlands compared a free-search condition

and a closed-search condition on an assignment completed by 229 Grade 6 students from eight different elementary schools. The students used the internet to collect information for the production of a travel brochure describing a five-day trip to ancient Rome.

The WebQuest was structured as follows: (1) introduction to the topic with some background information; (2) a description of the task; (3) some guidance on the processes necessary to complete the task; (4) an evaluation of task performance and; (5) a brief conclusion. One group of students was also given a list of 25 links to web pages that had been pre-selected as being relevant to the topic and suitable for Grade 6 students.

The other group was simply asked to search using Google. Students' topic knowledge was tested before and after completion of the task to assess the level of learning which had taken place.

What were the results of the study? Boys demonstrated significantly higher learning gains in the closed-search condition. In fact, there were no significant learning gains for boys in the free-search condition. Girls showed more or less equivalent gains in both conditions.

What does this mean for our classrooms? The researchers explain the differences between the results achieved by boys and girls by citing research which suggests that boys tend to

browse more than girls, and also tend to take less time to read each site before moving on. If this is true, then it is possible that the closed search provided the boys with sufficient structure to keep them on track.

Does this mean we should always structure web-search activities more tightly for boys in this way? Probably not. Such broad generalizations are rarely useful. A certain level of differentiation based on the browsing habits we observe in particular students or groups of students in our classrooms may be useful, however.

I do also wonder if there might not have been more differences between the closed-search and free-search con-

ditions if the task had required more higher-level thinking skills. The deeper the understanding required by a task, the more difficult it becomes to integrate and synthesize information from a variety of disparate sources.

This study: Segers, E. and Verhoeven, L. (2009) "Learning in a Sheltered Internet Environment: The Use of WebQuests". *Learning and Instruction* 19, pp. 423-432.

The WebQuest: [www.webquest.nl](http://www.webquest.nl). The English WebQuest on which it was based is "All roads lead to Rome", <http://www.esc2net/TIEYear3/projects/rome/default.htm>.



We want you in our social network.

Earn your Master of Arts in Educational Technology from Michigan State University's top ranked College of Education. Join us online or overseas. We have flexible programs specifically tailored for the international teaching community.

Learn more about our intensive summer study in Rouen, France  
June 27 - July 24, 2010  
by visiting  
<http://edutech.msu.edu> or  
follow us  
@maet on Twitter



Copyright of International Educator is the property of International Educator and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.